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March 14, 2008

TO: Mr. Carl Scarbro

Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory/OAR

2565 Plymouth Road

Ann Arbor, Michigan 48105-2425

FROM: Patrick M. Merritt

Engine, Emissions and Vehicle Research Division

SUBJECT: Monthly Overall Progress Report No. 8, including Financial Management Report,

for the period February 1, 2008 - February 29, 2008 Contract No. EP-C-07-028, SwRI Project No. 03.13363

"Broad Emissions Testing Support for In-Use Vehicles and Engines"

1.0 INTRODUCTION

The intent of this contract is to provide the Environmental Protection Agency Office of Transportation and Air Quality (OTAQ) with flexible support in testing and analysis of in-use engines and vehicles, and for in-use alternative fuels that may become available nationally over the next decade. Alternative fuels may include diesel fuel blends made with agricultural products (biodiesel) and gasoline blended with varying amounts of ethanol or other compounds. Support will be provided to evaluate regulated and unregulated pollutants from exhaust and evaporative emissions, to measure in-use emissions using Portable Emission Measurement Systems (PEMS), to blend ethanol, biodiesel, and other compounds and mixtures into conventional fuels, and to monitor the properties of such fuels. Engines and vehicles that will be assessed may include current and potential future on- and off-highway mobile sources, propulsion systems, or components thereof. In addition, development of new methods/procedures/equipment for unregulated emissions testing may be needed under this contract. Data produced from these tasks will be provided to OTAQ in specified formats for ready incorporation into databases or modeling software. This is a task assignment contract; as such, individual Work Assignments with specific objectives are issued by EPA, and each one is treated independently regarding performance of work and reporting unless otherwise specified.



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2.0 ACTIVE WORK ASSIGNMENTS AS OF FEBRUARY 29, 2008

Work Assignment 0-01, "EP Act Vehicle Testing," was received from EPA on September 5, 2007; however, on September 6, 2007 direction was received from the contracting officer to stop work and wait for an amended Work Assignment which would further define the requirements. The amended Work Assignment, 0-01.1, was received by SwRI on September 20, 2007. Further instruction was received to provide a Work Plan that only covers the work within the period of performance from September 20, 2007 until June 27, 2008, as there are several references to future anticipated work in the amended work statement. Due to the complexity of the Work Assignment (requiring multiple options to be structured and quoted, a large number of custom fuels to be quoted, and pricing to be established for some very specialized vehicles), SwRI requested an additional two weeks to prepare our Work Plan. This request was granted and the due date for the Work Plan was extended to October 19, 2007. Because we had not yet received bids for our cost estimates, SwRI requested another two week extension (which was granted). Our Work Plan for Amendment 1 was prepared by Mr. Kevin A. Whitney, and was submitted to EPA on October 26, 2007. A partial approval of the Amendment 1 Work Plan was received on November 28, 2007. Amendment 2 to WA 0-01 was received November 29, 2007. Because of uncertainties in how to perform NMOG, EPA provided clarification in the form of Amendment 3, which was received on December 12, 2007. Our Work Plan for Amendment 3 was submitted on December 21, 2007. Amendment 4 was received on January 24, 2008, and our Work Plan was submitted on January 31, 2008. Approval of our Work Plan for Amendment 4 was received on February 6, 2008, limited to 11,178 LOE hours and \$1,516,510. Mr. Whitney is the SwRI Assignment Leader and the SwRI project number is 03.13363.01.101. Ms. Connie Hart is the EPA Work Assignment Manager (WAM).

Work Assignment 0-02, "Testing for Dioxin/Furan Emissions in Samples of HDDE Exhaust", was received on January 17, 2008. Amendment 1 was received on January 25, 2008. Our Work Plan for WA 0-02, including Amendment 1, was submitted to EPA on February 1, 2008. Approval of our Work Plan was received on February 20, 2008. Mr. Patrick Merritt is the SwRI Assignment Leader and the SwRI project number is 03.13363.02. Mr. Kent M. Helmer is the EPA WAM.

Work Assignment 0-03, "Fuel Parameter Influences on Vehicle Emissions for EPAct Testing," was received on February 8, 2008. Our Work Plan was submitted to EPA on February 18, 2008 and approval was received on February 20, 2008. Dr. Robert Mason is the SwRI Assignment Leader, and Mr. Rafal Sobotowski is the EPA WAM.

3.0 MAJOR PROBLEM AREAS

None to report.

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4.0 CONTRACT FINANCIAL STATUS AND ADMINISTRATIVE MATTERS

Through February 15, 2008, cost and fee including commitments totaled Ex. 4 - CBI or the Base Period (6/28/2007 - 6/28/2008). Total SwRI hours for the Base Period, not including clerical hours, numbered Ex. 4 - CBI The average total cost per direct labor hour is Ex. 4 - CBI for the Base Period, as compared to the estimated cost per direct labor hour in the contract of Sex. 4 - CBI for the Base Period. Summaries of costs and labor hours for the Work Assignment are presented in Tables 1 through 8.

Ex. 4 - CBI

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Table 2. Costs for Work Assignments, Base Period (6/28/2008 – 6/28/2009)

WORK ASSIGNMENTS BASE PERIOD	
Funded Amount, Base Level of Effort	
Total Estimated Costs for Work Assignment 0-01 a	
Actual Total Costs for Work Assignment 0-01 (including commitments)	
Total Estimated Costs for Work Assignment 0-02	Ex. 4 - CBI
Actual Total Costs for Work Assignment 0-02	EX. 4 - CDI
Total Estimated Costs for Work Assignment 0-03	
Actual Total Costs for Work Assignment 0-03	
Total Estimated Costs for All Base Period (6/28/2007-6/28/2008) Work Assignments	E
Total Costs (includes commitments)	\$662,075.04

^a Only \$1,516,510 has been approved to date.

Table 3. Current Amount Claimed (per vouchers through 2/18/08)

	Current	Total
Work Assignment 0-01		
Work Assignment 0-02	Fy 1	- CBI
Work Assignment 0-03	LA. T	- GD I
TOTAL BASE PERIOD		

Table 4. Financial Summary for Individual Work Assignments

Work Assignment	Authorized Amount	Amount Invoiced Thru 2/15/08	Amount Paid Thru 2/15/08	Unbilled Allowable Costs	Remaining Amount ^a
0-01					
0-02		V	1 _		\square
0-03		Л. '			
Total Base Period		·	-	r	p

^a Amount authorized minus amount invoiced and unbilled allowable costs

Table 5. Overall Financial Summary for Contract

Total Base Amount, Base Period (6/28/2007 - 6/28/2008)	
Total Amount Funded for Base Period (6/28/2007 - 6/28/2008) (through Mod. 04)	
Total Amount Invoiced thru 2/15/2008	Ex. 4 - CBI
Total Unbilled Allowable Costs, Base Period (6/28/2007 - 6/28/2008)	LX. 4 - ODI
Net Funds Remaining, Base Period (6/28/2007 - 6/28/2008) (Funded-Invoiced-Unbilled)	
Total Amount Funded for Option Period I (6/28/2008 – 6/27/2009) (through Mods 4 & 5)	



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Table 7. Estimated Direct Labor Hours and Cost for Next Report Period

	WA 0-01	WA 0-02	WA 0-03	TOTAL
Estimated Direct			0 B	■
Labor Hours		НУ Д	- (:H	
Cost, Dollars	ļ.	LA. T	OL	/ L
	Ex. 4 - 0	CBI		

Table 8. Average Cost per Direct Labor Hour, Base Period Work Plans

	WA 0-01	WA 0-02	WA 0-03
Average Cost per Work Plan	Ev	1	CDI
Average Cost, Actual	CX.	4 -	CDI
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5.0 CLOSING

We strove to provide complete and accurate information in this report. Should you have any comments or questions, please contact Patrick Merritt by phone at 210-522-5422 or by email at pmerritt@swri.org.

Prepared by:

Patrick M. Merritt Senior Research Scientist Chemistry and Particle Science Emissions Research and Development THE

Jeff J. White

Reviewed and approved:

Director, Emissions Research and Development Engine, Emissions, and Vehicle Research Division

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Results and discussion given in this report relate only to the test items described in this report.